

REMARKS

Reconsideration of this application is respectfully requested. No new matter has been added. Claims 1-19 and 32-45 remain pending.

Claim Rejections – 35 U.S.C. § 103

Claims 1-19 and 32-45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. US 2003/0002474 to Alexander et al (“Alexander”) in view of U.S. Patent No. 4,486,739 to Franaszek et al (“Franaszek”).

Claim 1 recites, in part:

arranging the signal lines within the plurality of segments such that an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.

Alexander discloses a pipelined butterfly network that converts data between various widths and formats. The pipelined butterfly network receives a plurality of data streams of constant widths and rearranges the data streams into a multiplexed output data stream. However, Alexander does not disclose “arranging the signal lines within the plurality of segments such that an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.” Instead, figures 8A-8F “illustrate the state of the network in 6 successive clock cycles” (Alexander para. [0099]) and do not discuss arranging the signal lines in any particular manner. Figures 8A-8F describe how the input bits are passed from multiplexer to multiplexer after a certain number of clock cycles so that the input of four 8-bit streams of data are outputted as a 32-bit data word (see Alexander, fig. 8A-8F; para. [0101]).

In addition, Franaszek does not disclose the above-recited limitation. Instead, Franaszek discloses a method and coding system for an 8B/10B encoder (Franaszek Abstract; col. 3, lines 4-7) and does not disclose a method to arrange signal lines. Thus, if Alexander and Franaszek could be combined in the manner proposed in the Office Action, one of ordinary skill in the art would possess an 8B/10B encoder with a pipelined butterfly network to merge data streams. The

combination would still lack at least the above-recited limitation, and therefore would not have rendered claim 1, nor dependent claims 2-7 and 44, obvious.

Claim 8 recites, in part:

wherein an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.

For at least the reasons given with respect to claim 1, applicant submits that neither Alexander nor Franaszek discloses the above-recited limitation. Therefore, even if Alexander and Franaszek could be combined in the manner proposed in the Office Action, such a combination would still lack at least the above-recited limitation and would not have rendered claim 8, nor dependent claims 9-19 and 45, obvious.

Claim 32 recites, in part:

three or more signal lines forming at least three possible pairs of signal lines, a respective interline coupling parameter being associated with a respective pair of signal lines, each pair of at least two different pairs of signal lines among the possible pairs of signal lines being repositioned in the interconnection to reduce differences in interline coupling parameters associated with the at least three possible pairs of signal lines.

Applicant further submits that Alexander does not disclose a method for repositioning signal lines by using “a respective interline coupling parameter being associated with a respective pair of signal lines.” Franaszek also does not disclose the above-recited limitation. Therefore, even if Alexander and Franaszek could be combined in the manner proposed in the Office Action, such a combination would still lack at least the above-recited limitation and would not have rendered claim 32, nor dependent claims 33-43, obvious.

Claim Rejections – 35 U.S.C. § 103

Claims 1-19 and 32-45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,038,240 to Schelkunoff in view of U.S. Patent No.

4,486,739 to Franaszek.

Claim 1 recites, in part:

arranging the signal lines within the plurality of segments such that an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.

Schelkunoff discloses a system to reduce the effects of crosstalk in a coaxial conductor transmission line. The system reduces this effect by varying the phase change of waves transmitted transversely through the outer conductor from section to section along the transmission line. However, this phase change is achieved by obtaining a “proper selection of the thickness, conductivity or permeability of the outer conductor” (Schelkunoff, col. 2, lines 15-18) and not by “arranging the signal lines within the plurality of segments such that an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.”

As discussed above, Franaszek also does not disclose the above-recited limitation. Thus, even if Schelkunoff and Franaszek could be combined in the manner proposed in the Office Action, the combination would still lack at least the above-recited limitation, and therefore would not have rendered claim 1, nor dependent claims 2-7 and 44, obvious.

Claim 8 recites, in part:

wherein an order of the signal lines in the first segment is different than an order of the signal lines in the second segment, and an order of the signal lines in the third segment is different than the order of the signal lines in both the first and second segments.

For at least the reasons given with respect to claim 1, applicant submits that neither Schelkunoff nor Franaszek discloses the above-recited limitation. Therefore, even if Schelkunoff and Franaszek could be combined in the manner proposed in the Office Action, such a combination would still lack at least the above-recited limitation and would not have rendered claim 8, nor dependent claims 9-19 and 45, obvious.

Claim 32 recites, in part:

three or more signal lines forming at least three possible pairs of signal lines, a respective interline coupling parameter being associated with a respective pair of signal lines, each pair of at least two different pairs of signal lines among the possible pairs of signal lines being repositioned in the interconnection to reduce differences in interline coupling parameters associated with the at least three possible pairs of signal lines.

Applicant further submits that Schelkunoff does not disclose a method for repositioning signal lines by using “a respective interline coupling parameter being associated with a respective pair of signal lines.” Franaszek also does not disclose the above-recited limitation. Therefore, even if Schelkunoff and Franaszek could be combined in the manner proposed in the Office Action, such a combination would still lack at least the above-recited limitation and would not have rendered claim 32, nor dependent claims 33-43, obvious.

Claim Rejections – Official Notice

The cited references do not disclose the above-recited limitations. However, the examiner rejects claims 1-19 and 32-45 by taking official notice that one of ordinary skill in the art would know to experiment with and arrange the segments to minimize crosstalk. The examiner relies solely on the official notice to reject the claims even though the cited references do not disclose the above-recited limitations. It is never appropriate to rely solely on “common knowledge” in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001) (see MPEP § 2144.03).

Therefore, applicant respectfully disputes and traverses the examiner’s assertion of official notice, and requests that the examiner provide specific factual findings to support his conclusion of common knowledge.

Conclusion

Applicant respectfully submits that all pending claims are in condition for allowance. If a telephone interview would be helpful in any way, the examiner is invited to call the undersigned attorney.

Applicant hereby petitions for any necessary extension of time. Authorization is hereby given to charge deposit account 501914 for any fee due in connection with this Amendment, including any fee due in connection with a petition for extension of time.

Respectfully submitted,

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